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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/608,877

06/26/2003

David D. Martenson

D/A1690Q

7864

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7590

02/16/2005

PATENT DOCUMENTATION CENTER

XEROX CORPORATION

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ROCHESTER, NY 14644

EXAMINER

KO, TONY

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/608,877	Applicant(s) MARTENSON ET AL.	
	Examiner Tony Ko	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) 7-18, 32-43, 49 and 52-61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 25-31 and 50-52 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/26/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention: Species I: Fig. 3 (Claims 2-6, 19-23, 27-31, 44-48 and 50-52), Species II: Fig. 4 (Claims 7-10, 32-35, 53 and 54), Species III Fig. 5 (Claims 11-13, 36-38, and 55-57), Species IV: Transmissive of the coding (Claims 14, 15, 39, 40, 58, and 59), Species V: Non-linear sides (Claims 16, 18-23, 41-48, 60 and 61)

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 17, 24-26 and 49 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

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Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation Manuel Quiogue on 2/01/2005 a provisional election was made with traverse to prosecute the invention of Species I, claims 1-6, 19-31, 44-48 and 50-52. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-18, 32-43, 49 and 52-61 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claims 19-23 and 44-48 are also withdrawn from consideration if the feature of varying width to be found allowable, claims 19-23 and 44-48 would be allowable if incorporated into their respective independent claim.

DETAILED ACTION

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6, 25-31 and 50-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuura (U.S. Patent 5,604,345).

4. Regarding claims 1-6, 25,26, Matsuura discloses (Fig. 2) an optical encoder comprising: an optical grating (11, 12) for modulating a beam of light; a sensor (43) for sensing modulated light provided by the optical grating; the optical grating and the sensor being movable relative to each other (Col. 2, Lines 15-19); and the optical grating including a plurality of contiguously adjacent first encoder bars and a plurality of second encoder bars, wherein the contiguously adjacent first encoder bars and the second encoder bars are substantially uniformly spaced (Fig. 2) and wherein the first encoder bars are optically configured to change an amplitude of an output of the sensor. Matsuura also discloses the encoder wherein the second encoder bars are substantially identical width (11). Matsuura also discloses the optical encoder wherein the contiguously adjacent first encoder bars are wider than the second encoder bars (Fig. 2). Matsuura also discloses the encoder wherein the contiguously adjacent first encoder bars are wider than the second encoder bars and are of gradually changing width (Fig. 2). Matsuura also discloses the encoder wherein the contiguously adjacent first encoder bars are narrower than the second encoder bars (Fig. 2). Matsuura also discloses the encoder wherein the contiguously adjacent first encoder bars are narrower than the second encoder bars and are of gradually changing width (Fig. 2). Matsuura also discloses a position encoder comprising: means for providing a pattern of

alternating light and dark areas; and means for detecting movement of the pattern to determine a position of the pattern (Col 7, Lines 44-48).

5. Matsuura also discloses an optical grating comprising; a plurality of contiguously adjacent first encoder bars (the middle two bars in Fig. 2 has the same width); a plurality of second encoder bars; and wherein the contiguously adjacent first encoder bars and the second encoder bars are substantially uniformly spaced and wherein the first encoder bars are optically different from the second encoder bars. That is, the first bars and the second bars have different thickness so that each set of bars result in different amount of light intensity is considered as optically different. Matsuura also discloses the grating wherein the second encoder bars are of substantially identical width (Fig. 2). Matsuura also discloses the grating wherein the contiguously adjacent first encoder bars are narrower than the second encoder bars (Fig. 2). Matsuura also discloses the grating wherein the contiguously adjacent first encoder bars are narrower than the second encoder bars and are of gradually changing width. Matsuura also discloses the grating wherein the contiguously adjacent first encoder bars are wider than the second encoder bars. Matsuura also discloses the optical grating wherein the contiguously adjacent first encoder bars are wider than the second encoder bars and are of gradually changing width.

6. Matsuura also discloses an optical grating comprising: a first encoder bar; a plurality of second encoder bars; and wherein the contiguously adjacent first encoder bar and the second encoder bars are substantially uniformly spaced and wherein the first encoder bar (Fig. 2 or Fig. 10) is optically different from the second encoder bars.

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Matsuura also discloses the grating wherein the plurality of second encoder bars are of substantially identical width. Matsuura also discloses the first encoder bar is narrower than each of the plurality of second encoder bars. Matsuura also discloses the grating wherein the first encoder bar (the second bar from the right in of 12) is wider than each of the plurality of second encoder bars (the two bars adjacent to the first bar).

7. Claims 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Buehring (U.S. Patent 5,063,291).

8. Regarding claim 24, Buehring discloses (Fig. 2) a position encoder comprising: an optical track (22) for providing a pattern of alternating light and dark areas wherein the dark areas are substantially uniformly spaced and optically encoded to defined a predetermined position; and a quadrature sensor (claim 13) for detecting the pattern of alternating light and dark areas.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Ko whose telephone number is 571-272-1926.

The examiner can normally be reached on Monday-Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TKO



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